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UTCS ComputerNews

Season's Greetings

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The Editor
COMPUTERNEWS
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Network address: PARROTT at UTORONTO
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Let's Talk About It: Class E Changes

[The following article is not subject to editorial review.]

Gentle reader: We've received a number of comments in response to my "No Free Lunch" article about Class E in the last issue. We have decided to not change the discount given on CPU charges but rather to introduce a minimum charge per job. Class E jobs will pay the greater of the sum of their discounted CPU and nondiscounted other charges or five dollars. Any charges related to printing do not contribute to meeting the minimum. The minimum charge that we used to have a couple of years ago was fifteen dollars. Since Class E was never designed to be just inexpensive, but instead to be a service for reasonable number crunching and CPU intensive jobs, the new minimum makes sense. We will institute the change December 1.

Warren Jackson
Director, UTCS

The NetNorth Network

Networking is one of the latest and most fascinating developments of modern computing. Computer networks, either autonomous or linked to the telephone network, now connect thousands of universities, institutes and businesses around the world.

Many computers at U of T are connected to some of these networks. One of the fastest and most versatile networks available to UTCS users is NetNorth. This network connects more than 50 computers at 19 universities (and the National Research Council) from British Columbia to Newfoundland. Computer users at UTCS can communicate with colleagues who are on the network and thus share information via real-time messages and electronic mail; send and receive documents, programs and data; and access several file server computers around the network.

NetNorth is in turn connected to the BITNET network in the United States and, through BITNET, to the EARNET network in Europe. EARNET itself connects to other networks in individual countries, such as the JANET network which connects over 250 sites in Great Britain. The NetNorth/BITNET/EARNET combination currently connects more than 1500 computers at over 1200 institutions of higher learning and research in 19 countries on four continents.

Membership in NetNorth is restricted to specific classifications: degree-granting institutions; institutions of higher learning; nonprofit organizations of higher learning; and industrial, government, or commercial organizations with substantial links to higher education.

In light of these restrictions, use of NetNorth must be consistent with the network's goal, i.e., facilitating the exchange of noncommercial information in support of a member institution's mission of education and research. This ensures the continued high quality of the network.

For the technically inclined, NetNorth uses dedicated lines running at 9600 baud. Both IBM and non-IBM computers are supported, so that a CMS user at U of T can communicate with colleagues at a UNIX computer site in California, or a VMS site in Sweden. NetNorth/BITNET is a "store and forward" network: information originating at a given site is received by intermediate network sites and forwarded to its destination. Information is forwarded on an immediate basis, subject to resource and line

continued...

NetNorth continued

utilization. Transmission times are very fast; transferring a file to California or Europe takes anywhere from a few minutes to a few hours!

In order to link with other networks, "gateways" have been developed around the network to interconnect with CSNET (computer science research departments and institutions), USENET (the UNIX mail/news network), and ARPAnet (the U.S. defense Advanced Research Projects Agency). There is also a limited access facility to VNET, IBM's internal communications network.

CMS users at UTCS have easy access to the NetNorth network. The CMS NOTE and SENDFILE commands are used to send mail and files to other users. For example, once you know that your colleague at the University of Alberta has an account JSMITH, you can send a note simply by typing:

```
NOTE JSMITH AT UALTVM
```

where UALTVM is the node name of the computer at U of A. Your colleague must supply you with his/her account name.

The charge for sending mail and files over NetNorth is simply your session charge plus $1/1000 eighty-character records transmitted. This makes NetNorth not only affordable, but in many cases less expensive than other services, such as Telex and regular mail.

NetNorth provides a unique means of communicating with other researchers and academics, a means that we hope our users will take advantage of.

For assistance in determining whether your colleagues are on NetNorth, or for more information on networking and electronic mail contact Paul Shindman at 978-6878.

Paul Shindman

Microcomputer News

* * * BBS Questionnaire Results * * *

The first questionnaire on the UTCS Microcomputer Bulletin Board System was completed by 48 people. The questionnaire dealt mostly with funding issues concerning micro hardware, software, and the activities of the Micro Support Group. Some questions about the BBS service itself were also included.

The more interesting results are summarized below:

	Percentages (excludes n/a)		
	No	Yes	Notes
1. Have you had trouble signing on to the BBS (queuing)?	63	37	1
2. Should BBS offer multiuser access?	8	92	
3. Have you read MSG software reviews?	67	33	2
4. Are you a member of a campus User Group?	60	40	3
5. Would you like to be able to rent micros from UTCS?	54	46	4
6. Should there be publicly available micros on campus?	23	77	4
7. If public micros, would you be willing to pay, by the hour, to use them?	37	63	4

continued...

Microcomputer News continued

	No	Yes	Notes
8. Should there be a micro classroom (like the UTCS Education Facility)?	17	83	
9. Should Public Domain software be centrally funded?	27	73	
10. Should UTCS set up a Micro Reading Room?	15	85	
11. Should UTCS set up a Software Lending Library?	23	77	5
12. Have you had trouble reaching MSG by phone (via 8701)?	73	27	6
13. Should MSG increase its staff?	29	71	7
14. Should MSG continue doing software reviews?	5	95	
15. Should MSG cover major micro shows (with debriefings)?	32	68	
16. Should the UTCS Micro Lab be made more available to campus users?	23	77	8

Notes:

1. Queue sizes were reported as 1 or 2, mostly in the evening.
2. Reviews that haven't been included in the *Academic's Guide* are available in the General area on the BBS. Comments about them ranged from "fair" to "excellent," with "very good" as the overall response. (Thanks!)
3. Many people indicated they didn't know User Groups existed. See "Microcomputer News" in *COMPUTERNEWS* No. 226.
4. The consensus was that IBM PCs and Macintoshes be used as public micros. People would be willing to pay $5/hour to use them. There was no consensus at all on rentals -- suggested rates ranged from $3/hour to $300/month, for a variety of machines.
5. Objections were raised concerning the legalities surrounding copy protection and pirating.
6. Most comments referred to busy phone lines.
7. Comments ranged from "MSG too busy" and "to allow more product reviews," to "I need a job."
8. Comments indicated the need for occasional access to a specific kind of machine, service, or software package; and the usefulness (to individuals and departments) of testing out software or hardware before purchase. Of course, the Micro Lab is already used for these purposes, but it is currently available by appointment only.

One question not shown above is worth mentioning: "Should the MSG be doing more seminars and presentations?" Forty percent of respondents said they want more, and 60 % said the level was okay as is. No consensus was reached on what topics to cover, however.

A list of items that the Micro Lab might consider acquiring was also included in the questionnaire, where respondents indicated whether or not the item should be centrally funded. There was a high degree of interest in: **Reflex**, a database management system; a **tape backup unit**; the **Genoa Spectrum** card; and the **Atari 520 ST**. Other suggestions included the Amiga, SAS under PC-DOS, the AT&T UNIX PC, and a plotter.

* * * *

The results of the BBS questionnaire will hopefully have an effect on future micro activities and purchases by UTCS; central funding is required for most of them. If you have any ideas or opinions on future directions of the Micro Support Group, please drop me a line (MSG, Room 257, McLennan Labs). I'd be glad to hear from you.

Paul Roth

Micro Laser Printing

UTCS is announcing a new product that brings micro owners laser printer quality and speed at a reasonable cost.

Micro owners can enter documents on their own micro systems using almost any word processing package. The document is formatted for a Diablo 630 daisy wheel printer, but the output is directed to a file instead of to a printer. This file is transferred to the UTCS VM/CMS system for translating and printing on the Xerox 8700 Laser Printer.

Print styles such as bold, underlined, superscript, subscript and many foreign language characters are supported on the 8700 laser printer.

The service is particularly useful for very long documents. You don't have to "babysit" the printer, you don't have to fight with ribbons, and you don't have to feed in sheets of paper. You will also appreciate its quiet operation. Transferring the document can be done from your office (if you have a modem or PACX connection) or you can arrange to bring IBM PC compatible floppies to our Micro Lab (Room 257, McLennan Physical Labs) and transfer them from there at a very high speed.

A UTCS CMS account is required for this service. Most documents cost less than 15 cents per page to print one copy (University rates). Additional copies cost about 5 cents per page. These charges are billed to the CMS account.

For more information please contact Advising Services at 978-HELP or Patricia Hood at 978-4548.

Terry Jones

Nota Bene for Less Money?

The word processing package Nota Bene continues to generate considerable interest among academics at the University. Its price, alas, is very high in relation to its nearest competitors — US$495 or about CAN$650 (plus tax). Its users, however, seem generally agreed that it is worth the price, but that price is beyond the reach of many.

As you may know, the Modern Languages Association sells Nota Bene to its members at a 20% discount, which brings the price down to about CAN$515. At the time of writing, we are investigating a multiple-program license agreement that would allow us to coordinate group purchases of Nota Bene. Dragonfly Software, producer of this package, offers a 30% discount to qualified institutions purchasing from 4 to 9 copies, a 40% discount for 10 to 19 copies, and larger discounts for larger purchases. In some cases these discounts will be less than they seem: an individual to whom a copy is resold must pay 7% PST, for example. Nevertheless, a coordinated group purchase seems worth the effort, especially if more than ten people are involved.

What we have in mind is to purchase copies of Nota Bene on behalf of an already assembled group (such as members of an academic department), *not* to buy several copies and then resell them to whoever wants one. The latter is simply beyond our resources.

We cannot say exactly when we will be able to offer this service, since the contract for a multiple-program license needs detailed consideration, nor can we guarantee absolutely that it will be offered. If, however,

continued...

Nota Bene continued

you are interested in purchasing Nota Bene at a considerable discount and are not in a great rush, please give me a call. If all goes well (and it may), the price of Nota Bene should fall to a new and delightful low.

Dr. Willard McCarty

Updates for the *Academic's Guide*

As we have noted in past issues of *COMPUTERNEWS,* Product Reviews written since the *Academic's Guide to Microcomputer Systems* was published are available on the Microcomputer Bulletin Board System; these Reviews will be incorporated in the next edition of the *Guide.* The versions on the BBS have been stripped of their non-ASCII characters. This allows you to print them on any printer, but it also prevents the kind of highlighting used in the *Guide.* If you are unable to print from the BBS, or you would like to have a copy more closely resembling the Reviews in the *Guide,* you may now purchase separate update Product Reviews from the Information Office. At present, reviews for DATAEASE, Nota Bene, Notebook II, and WordPerfect are available.

Paul Roth

Where to Find the *Academic's Guide*

In last issue's article announcing publication of the *Academic's Guide to Microcomputer Systems,* those wishing to purchase a copy were asked to contact Dale Wright at the UTCS Information Office. The address given (Room 350, 255 Huron St.) was intended to be for *mail orders.* If you wish to pick up a copy of the *Guide,* please come directly to the Information Office, Room 206 in the Engineering Annex (11 King's College Road).

Because the *Guide* is printed inhouse, on the laser printer, we produce relatively few copies at a time. Although we try to ensure that there are always copies available, you are encouraged to phone ahead if you plan to drop by. The number is 978-4990.

Martha Parrott

SAS® under PC-DOS

This article explains the details of the annual site license for base SAS and SAS/STAT under PC-DOS, which has been acquired by the University of Toronto. At this time only base SAS has been received. It has been installed successfully on an IBM XT, a Zenith ZF-241-81 (an AT-compatible machine) and a COMPAQ DESKPRO 286. The Statistical and Numerical Analysis Computing (SNAC) group within UTCS is continuing to test base SAS, including the display manager, the micro to mainframe link, and the new procedure menu system. The latter provides a set of menus which assist in preparing SAS code for procedures. Copies of base SAS are now being distributed to University users who have registered with UTCS. SAS/STAT has not arrived. SAS Institute has announced availability of SAS/STAT in December 1985, and it will be distributed to registered users when it arrives.

continued...

SAS® under PC-DOS continued

In order to minimize the University's costs of administering the licensing and distribution of SAS under PC-DOS, the University's Central Administration is helping to fund the acquisition and support of this package. Users are required to pay $50 per installation plus $38 for diskettes. Manuals are an additional expense, depending on which ones are wanted. Only employees or students at the University of Toronto who are able to draw on University or research funds are eligible to obtain a copy through the site license. Licensing is for a one-year period, which expires on June 30th each year. There will be an annual renewal fee of $50 required to continue using base SAS and SAS/STAT under PC-DOS.

Hardware requirements:

The minimum hardware required is an IBM PC/XT, IBM PC/AT or a compatible machine with at least 10Meg hard disk and at least 512K RAM. Base SAS and SAS/STAT will occupy between 4 and 5Meg of the hard disk. SAS Institute strongly recommends 640K RAM. They also recommend a math coprocessor chip be installed to improve performance. SAS Institute only supports the product running under PC-DOS. MS-DOS will probably be adequate, but there are no guarantees.

SAS Institute has indicated that the major difficulty with some versions of MS-DOS running on compatible machines has been installing SAS. Once it is installed, it generally runs properly. If the RESTORE command in your version of MS-DOS can restore a file created with the BACKUP command in PC-DOS, the install should go smoothly. There is also a possibility of incompatible video display interfaces in some versions of MS-DOS causing problems.

How to register:

Registration forms can be obtained from the UTCS Accounting Office or the UTCS Information Office. Completed forms should be returned to Bill Fehlner, UTCS, Room 217, McLennan Physical Labs, 255 Huron Street. Diskettes will be distributed in the order in which completed forms are received. Users will also receive an installation manual and a SNAC-produced document to assist them in getting started with SAS in the PC environment.

Obtaining further information:

A technical note on registering for SAS under PC-DOS is available through the TECHNOTE facility on CMS, TSO, and WYLBUR. Further technical notes on the results of testing the product are planned. For technical information about SAS under PC-DOS or assistance in completing the registration form, please call Bill Fehlner at 978-6509.

Bill Fehlner

® Registered trademark of SAS Institute Inc., Cary, N.C.

Backslash Conversion on CMS

Before November 11, 1985, a silent conversion took place in your CMS files. Each time you typed a backslash, it was converted to a cent sign but continued to display on your terminal screen as a backslash. If you have wondered why cent signs appeared in printouts where you expected backslashes, this was the reason.

Some products on CMS are able to handle cent signs as replacements for backslashes -- SCRIBE is an example. However, not all products have this ability, and the silent conversion from backslash to cent sign has caused problems for some users.

continued...

CMS continued

Now, UTCS has eliminated the conversion of backslashes: each time you type a backslash it remains a backslash, and your printouts will not be sprinkled with unexpected cent signs. Files created before November 11 can be modified by a special EXEC file, so that they contain backslashes instead of cent signs. Users are encouraged to do the modification even though they may not have experienced difficulties in the past.

To modify a file containing backslashes, after the ready message or on the command line type:

```
backslash fn ft
```

where "fn ft" is the filename and filetype of the file to be modified. The BACKSLASH command will give you a message stating how many backslashes were converted or, if no unconverted backslashes are found, a message that no modifications were made. In FILELIST, you can use the BACKSLASH command in the CMD area with the same effect.

To see the online HELP file for the BACKSLASH command, type:

```
help backslash
```

Questions about the backslash conversion or about using this command should be referred to Advising Services at 978-HELP.

Patricia Hood

The DISKSIZE Command

There is a new EXEC file available in the CMS service to help you modify your Virtual Machine. It is called DISKSIZE. You can use this EXEC or command to change the amount of space available to any of your minidisks, thereby increasing or decreasing the amount of space for which you are charged.

For example, suppose you open a CMS account with three cylinders of space on your "A" disk (i.e., your work disk). After starting your latest project, you discover that your data will take up at least ten cylinders of space. You may use the DISKSIZE command to increase your disk storage space from three cylinders to ten. When your project is finished, you discover that you now need only five cylinders to hold your data and to do your day to day work. Again, you can use the DISKSIZE command, this time to decrease your storage requirements.

Another time, you may decide to take a vacation. Of course, you would like your CMS account to accumulate the smallest possible charges for disk storage while you winter in the Bahamas. The DISKSIZE command has a TRIM option that will calculate the least amount of disk space you need. An example of this is shown below.

To use DISKSIZE, you must know the "virtual address" of the disk you wish to modify. To find out the virtual address of your "A" disk, for instance, type:

```
query search
```

This will list on the screen all the disks that are accessed by your Virtual Machine. The virtual address is the three-digit number in the second column.

Note:

All space requirements are expressed in whole cylinders. No fractions of cylinders are allowed.

DISKSIZE will not allow you to decrease your minidisk to a size that is too small to hold your data.

continued...

DISKSIZE continued

Because the process of changing your disk size can take up to two hours to complete, it is suggested that you perform the change at the end of the working day. Then your disk will be ready for you when you return. In most instances, the process will take from 15 to 30 minutes.

You must relinquish control of the disk while it is being modified. A straightforward way of doing this is to logoff. You may sign on again right away, but you will not have access to that minidisk until the change is complete.

Examples:

My "A" disk, which is located at virtual address 191, currently has three cylinders of space. I want to increase it to ten cylinders. Type:

```
disksize 191 10
```

My "Z" disk, located at virtual address 224, currently has 15 cylinders of space. I would like to decrease the amount of storage to six cylinders. Type:

```
disksize 224 6
```

I am going on sabbatical for a year, and I would like my data to use the minimum amount of space. The data is on my "A" disk, located at virtual address 191. Type:

```
disksize 191 trim
```

To receive online help for the DISKSIZE command, type:

```
help disksize
```

If you have any questions about DISKSIZE, please call Advising Services at 978-HELP.

Steve Younker

Waterloo C Version 1.2 Available Soon

UTCS will soon be upgrading its VM/CMS service by introducing the Waterloo C Version 1.2 compiler. This compiler is a significant enhancement over the previous compiler and has many new features.

Some of the compiler changes in Release 1.2 include:

1. The addition of an alignment feature for aligning data such as ints and floats in C programs for improved performance.
2. Various compiler corrections including preprocessor macro definition length bugs, and "sizeof" on initialized arrays.
3. The "include id," where "id" is defined as a file name, is now accepted.
4. There is now a code optimizer option.

There have also been several functions added to Clib, plus CMS help files for online documentation. More information on Waterloo C is available in the manual *The Waterloo C User's Guide,* which can be ordered from Waterloo through the UTCS Information Office.

Interested users should contact Advising Services at 978-HELP for specific information.

Herb Kugel

Class A Print Limit Increased

The maximum number of printed lines for MVS Class A jobs has been increased from 15000 to 30000 effective November 13, 1985. This higher limit will allow faster turnaround time for users with print jobs that would otherwise have gone into the Class B queue. Users of our other services, GP UNIX and CMS, will also get this benefit for their printed output.

This new limit has been made possible by several technological advances in the UTCS hardware inventory. The Xerox 8700 Laser Printer installed last year not only provides excellent print quality but is on an average ten times faster than the old IBM 1403 printers previously used. A job that used to take an hour to print on a 1403 now takes only five or six minutes on the 8700.

Another advance has been in disk storage technology. The types of disk used for spooling output in the MVS operating system have changed over the years, to the point where the system can now store many more jobs on the spool disk before they are printed.

The default output limit remains at 3000 lines as a protection feature for jobs that go into loops or otherwise print more than they should. To request more lines in your output, simply put the following statement after your JOB statement:

```
/*JOBPARM LINES=n
```

where n is the desired output in thousands of lines.

Paul Shindman

UTCS Noncredit Short Courses

UTCS offers a number of short, noncredit courses on the use of various products and services that we support. These courses are available to students, faculty and staff of the University of Toronto, as well as to other users of our system.

Complete course descriptions for all noncredit courses offered at UTCS are available at the Information Office, Engineering Annex, Room 206, and at the Accounting Services Office, McLennan Labs, Room 337.

Due to the limited seating capacity in the Education Facility, and the number of terminals available for our hands-on courses, registration is required for short courses.

Please note that we reserve the right to cancel courses, if registration is too low.

Anyone interested in taking any of these courses must register in person with:

Education Coordinator
Engineering Annex, Room 207
978-4565

A nonrefundable Administration Fee of $10 per course is due at the time of registration. It may be paid by cash, cheque or on a Customer Account Number (CAN).

(Anyone interested in credit courses should contact the Department of Computer Science at 978-6360.)

The following courses are offered:

FORT/CMS101 - Introduction to CMS for FORTRAN Users
Date: February 3-7, 1986
Time: 9:30-12:30 noon

JCL101 - IBM Job Control Language for Beginners
Date: February 10-14, 1986
Time: 2:00-3:00 p.m.

continued...

UTCS Short Courses continued

SAS/CMS101 - Introduction to SAS and CMS
Date: December 9-20, 1985
Time: 9:30-11:00 a.m.

SAS/CMS101 - Introduction to SAS and CMS
Date: January 13-24, 1986
Time: 2:00-4:00 p.m.

TXT/CMS101 - XEDIT and SCRIBE on CMS
Date: January 20-31, 1986
Time: 9:30-11:30 a.m.

TXT/SCR202 - Special SCRIBE Topics
Date: January 27-29, 1986
Time: 1:00-3:00 p.m.

Irene Rosiecki

Change Committee

Changes to the IBM Academic MVS Machine Services

1. On September 26, all printing at the Robarts site was merged onto one printer connected to a MicroVAX Network Server.
2. The EAT 1403 printer was replaced with an SSI QT600 printer on October 28.

Changes to Academic VM/CMS Machine Services

1. VS FORTRAN Version 1.4 was made available to CMS users on September 16. GETME was changed accordingly.
2. Online HELP for WATFOR77 was in place on September 23. Also on that date, the support level was increased to Class A. A new release was installed on October 18.
3. On September 23, Waterloo C and VS PASCAL were introduced and made available via the GETME facility. Both of these products receive Class C support.
4. Bug fixes were applied to the previous version of KERMIT (CURRENT) on October 11. They are in KERMIT (NEW).
5. On October 11, accounting tools were introduced allowing users to access detailed usage data.
6. The installation of CAN-based Accounting for MVS system printing from VM was completed October 28.
7. VS FORTRAN Version 2.2 was made available on October 30.
8. A GRIPE facility was introduced on October 25.

Changes to Other Systems and Services

1. A user test of printing support on the Xerox 8700 Laser Printer for microcomputers was completed on September 26.
2. The installation of three MicroVAX print server facilities to support the Department of Computer Science instructional microcomputers was completed on September 30.
3. The installation of the Department of Computer Science instructional microcomputers at St. Michael's, Robarts, Sidney Smith, and Trinity sites was completed October 2.

Beverly Scarborough

Personnel Changes

The following personnel changes took place at UTCS during the months of October and November.

Hung Thanh Chu joined Operations as a Computer Operator I.

Rosa Ciddio began full-time with Operations, as the new Tape Librarian.

Lujbisa Trkulja was promoted to Computer Operator III.

Corot Reason, who has been with UTCS for six years, has accepted a position in industry.

Congratulations are extended to all of you.

Elizabeth Weitmann

Hours of Service

UNIVERSITY OF TORONTO COMPUTING SERVICES
CHRISTMAS & NEW YEAR'S HOURS OF SERVICE

	*24 Tues.	25 Wed.	26 Thurs.	27 Fri.	28 Sat.	29 Sun.	30 Mon.	31 Tues.	1 Wed.
IBM MVS GPJS (Classes B and E) Calcomp, Gould, Xerox 8700	N/X	X	X	X	X	X	X	X	X
IBM MVS GPJS (Class A) WYLBUR, APL, TSO	N/UO	UO	UO	UO	UO	UO	UO	UO	UO
IBM VM/CMS	N/UO	UO	UO	UO	UO	UO	UO	UO	UO

Legend

N - normal hours of service
X - service unavailable
UO - unattended operation

* *On December 24, normal attended operations will be available until 12:00 noon.*

During the period of unattended operation the Sidney Smith site, Robarts site, and the Education and Research Interactive Terminal Room will be closed. On January 2-3, the Robarts site hours will be 8:30 - 21:00. It is planned to have the Engineering Annex open on a limited basis during the holiday period. Please check at this site for precise arrangements.

Users should note that this is a tentative schedule and may be altered via HOTNEWS and alert notices closer to the Christmas period.

Documents at UTCS

All vendor-produced documentation may be ordered through the UTCS Information Office, Room 206, Engineering Annex. UTCS documents and selected vendor documents are also stocked there for purchase. Whenever feasible, documents are made available online, and users are encouraged to print their own copies. On the MVS and VM machines, special commands have been provided for this purpose.

To print online documents on:

IBM MVS	IBM VM/CMS	GP UNIX
WYLBUR users type "do document?"	type "help document"	use *ipr* command
TSO users type "help document"		
APL users type ")LOAD 1 UTCSGUIDE<CR>HELP"		

See examples at the end of next page.

UTCS Documents in hardcopy

New:

Previously announced:

Academic's Guide to Microcomputer Systems
Character Sets for Highspeed Printing
UTCS GUIDE TO PRODUCTS AND SERVICES: Introduction
UTCS GUIDE TO PRODUCTS AND SERVICES: Basics
UTCS GUIDE TO PRODUCTS AND SERVICES: Accounting
UTCS Catalogue: Access, Part 1
UTCS Catalogue: Access, Part 2
UTCS Catalogue: IBM MVS Utilities
UTCS Catalogue: Numerical Products
UTCS Catalogue: Statistics Products
UTCS Catalogue: Storage
UTCS Catalogue: Text Products
UTCS Guide to Census Tapes
UTCS Guide to File Transfer Service
UTCS Guide to KERMIT
UTCS Guide to Mainframe File Transfer Facility
UTCS Guide to Text Processing on GP UNIX

UTCS Documents online	MVS MANUAL	CMS LISTING	GP UNIX	Forms Code
New:				
UTCS Guide to Micro Laser Printing	MICRLASR	MICRLASR		*
Previously announced:				
UTCS GUIDE TO PRODUCTS AND SERVICES:				
Basics	BASICS	BASICS	/usr/doc/utcs/basics	*
UTCS Catalogue: Access, Part 1	ACCESS1		/usr/doc/utcs/access1	*
UTCS Catalogue: Access, Part 2	ACCESS2		/usr/doc/utcs/access2	*
UTCS Catalogue: IBM MVS Utilities	MVSUTIL	MVSUTIL		*
Product-Function List	UTILLIST	UTILLIST		BXQD
UTCS Catalogue: Numerical Products	NUMCAT	NUMCAT		*
Product-Function List	NUMLIST	NUMLIST		BXQD
UTCS Catalogue: Statistics Products	STATCAT	STATCAT		*
Product-Function List	STATLIST	STATLIST		BXQD
UTCS Catalogue: Text Products	TEXTCAT	TEXTCAT	/usr/doc/utcs/textcat	*
UTCS Guide to APL	APLGD			*
UTCS Guide to APLXFR	APLXFR			*
UTCS Guide to BMDP	BMDP	BMDP		*
UTCS Guide to Census Tapes	CENSUS	CENSUS	/usr/doc/utcs/census	*
UTCS Guide to File Transfer Service	FTS			*
UTCS Guide to GP UNIX			/usr/doc/utcs/gpunix	*
UTCS Guide to GPJS	GPJSX	GPJSX	/usr/doc/utcs/gpjs	*
UTCS Guide to Highspeed Printing	PRINT	PRINT	/usr/doc/utcs/print	*
UTCS Guide to IBM MVS Online Storage	IBMDISK	IBMDISK		*
UTCS Guide to KERMIT	KERMIT	KERMIT	/usr/doc/utcs/kermit	*
UTCS Guide to Mainframe File Transfer Facility	MFTF			*
UTCS Guide to SAS	SAS	SAS		*
UTCS Guide to SCRIBE		SCRIBE	/usr/doc/utcs/scribeguide	*
(For printing instructions, see page 1 of document)				
**Recommended forms code for the 8700 is YXLE unless otherwise stated.*				

UTCS Documents online	**MVS MANUAL**	**CMS LISTING**	**GP UNIX**	**Forms Code**
UTCS Guide to Series/1 Terminal Use	SERIES	SERIES		*
3270 Emulation:				
UTCS Guide to Cybernex APL100 and Volker Craig VC404	CYBER	CYBER		*
DM1520	DM1520	DM1520		*
Hardcopy Terminal	HARDCOPY	HARDCOPY		*
IBM 3101	IBM3101	IBM3101		*
IBM PC KERMIT	PCKERMIT	PCKERMIT		*
SOROC IQ	SOROC	SOROC		*
VT52	VT52	VT52		*
VT100	VT100	VT100		*
UTCS Guide to SPSS	SPSS	SPSS		*
UTCS Guide to SUBUTILS	SUBUTILS	SUBUTILS		*
UTCS Guide to Text Processing on GP UNIX			/usr/doc/utcs/text	*
UTCS Guide to TFW.MAK in SCRIBE		TFWMAK	/usr/doc/utcs/tfwguide	*
UTCS Guide to TSO (Draft)	TSOGD			*
UTCS Guide to UTDSUTIL	UTDSUTIL	UTDSUTIL		*
UTCS Guide to VM/CMS	CMSGD	CMSGD		*
UTCS Guide to WYLBUR	WYLINTRO			*
UTCS WYLBUR Tutorial	WYLTUTOR			*
Other Documentation online:				
KERMIT Protocol Manual	KERMITPM	KERMITPM		YXOE
KERMIT User Guide	KERMITUG	KERMITUG		YXOF
Waterloo SCRIPT				
Reference Manual	WSCRPTRF	WSCRPTRF		YXLC
User's Guide	WSCRPTUG	WSCRPTUG		YXLC
GML USER'S Guide	GMLUG	GMLUG		YXLC

In these examples, the document to be printed is the UTCS Guide to Census Tapes (MANUAL/LISTING=CENSUS).
<CR> means carriage return.

TSO:	document census forms(yxle) <CR>
WYLBUR:	do document <CR> and respond to the prompts.
CMS:	document <CR> <CR> laser census listing (forms yxle <CR>
GP UNIX:	nohup ipr -8p -fyxle /usr/doc/utcs/census & <CR>

* *Recommended forms code for the 8700 is YXLE unless otherwise stated.*

Recent Acquisitions in the Computer Library

ACM Symposium on Principles of Distributed Computing, 4th, Minaki, Ont., Aug. 1985.
Proceedings.
New York, ACM, 1985.

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Proceedings of Session 84, Calgary, May 1984.

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Proceedings.

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Proceedings.
New York, IEEE, 1984.

Dowty, David R., ed.
Natural language parsing: psychological, computational and theoretical perspectives, ed. by D.R. Dowty et al.
Cambridge University Press, 1985.

Fairley, Richard E.
Software engineering concepts.
New York, McGraw-Hill, 1985.

Gray, Peter M.D.
Logic, algebra and databases.
Chichester, Eng., Ellis Horwood Ltd., 1984.

Harvey, Brian
Computer science Logo style. v.1: Intermediate programming.
Cambridge, Mass., MIT Press, 1985.

International Conference on Distributed Computing Systems, 3d, Miami, Oct. 1982.
Proceedings.
Silver Spring, Md., IEEE Computer Society Press, 1982.

International Conference on Fifth Generation Computer Systems, Nov. 1984.
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Tokyo, Omsha Ltd., 1984.

Kandel, Abraham.
Fuzzy techniques in pattern recognition.
New York, Wiley, 1982.

Owen, Tony.
Assembly with robots.
Englewood Cliffs. N.J., Prentice-Hall, 1985.

Yourdon, Edward, ed.
Writings of the revolution: selected readings on software engineering.
New York, Yourdon Inc., 1982.

Stephanie Johnston

Technical Reports Recently Received in the Computer Library

Carnegie-Mellon University

Bradshaw, Gary L.	Learning to recognize speech sounds: a theory and model. 90 p. #85-136.
Gunter, Carl A.	Comparing categories of domains. 21 p. #85-141.
Kazar, M.L.	Automatic distribution of programs and data in a distributed environment. 144 p. #85-137.
Mulmuley, Ketan.	Full abstraction and semantic equivalence. 133 p. #85-148.

continued...

Computer Library continued

Digital Equipment Corporation

Guttag, J.V. et al.	Larch in five easy pieces. 119 p. Systems Research Center, #5.
Schroeder, M.D., et al.	A caching file system for a programmer's workstation. 23 p. S.R.C., #6.

Newcastle upon Tyne. University

Shrivastava, S.K.	Workshop on distributed computing. 96 p. #203.

Stanford University

Cheriton, D.R. and Deering, S.E.	Host groups: a multicast extension for datagram internetworks. 8 p. #CS-85-1058.
Knuth, Donald E.	Theory and practice. 10 p. #CS-85-1061.
Trickey, Howard.	Compiling Pascal programs into silicon. 122 p. #CS-85-1059.

Zürich. Eidgenössisch Technische Hochschule

Frey, H.P., et al.	Caliban: its user-interface and retrieval algorithm. 46 p. #62.
Muller, Carlo.	Module-Prolog: user manual. 43 p. #63.

Stephanie Johnston

Consulting and Enquiries

Applications Support & Advising Supervisor	Alex Nishri	MP257	7109
External Marketing Consultant	Ihor Prociuk	MP350	6875
Erindale College	Joe Lim	2035	828-5311
Scarborough College	William Barek	S626	284-3173

General Enquiries	Dale Wright	EA206	4990
Account & Access Code Enquiries (U of T)	Agatha Stevens	MP337	8703
Account & Access Code Enquiries (External)	Sylvia May	MP337	7148
Tape Library (Academic Services)	Rosa Ciddio	MP368	7319
Tape Library (Administrative Services)	Miranda Fong	MP368	6693
Terminal Rentals	tba	SF4306	3787
U of T Computer Library	Stephanie Johnston	EA206	2987

Central Advising Office (Appointments)	HELP	300 Baud Interactive Services	6200
Central Advising Office (Phone-in)	HELP	1200 Baud Interactive Services	3959
Microcomputer Support Group (MSG)	8701	DATAPAC	4320, 0056
Numerical/Statistical Advising (SNAC)	STAT	Telenet	0302043200056
System Status Enquiries (GP UNIX)	4318	Tymnet	<backspace> DPAC;302043200056
System Status Enquiries (IBM)	7393		

UTCS Directory

Director	Dr. Warren Jackson	MP350	8948
Associate Director	Eugene Siciunas	MP350	5058
Managers			
Communications & Technical Support	Norman Housley	SF4306	4967
Internal Systems & Administration	Ron Vander Kraats	MP350	4428
Operations	Dr. Bob Chambers	MP350	7092
Systems	Bill Lauriston	MP331	3579
User Interface	Don Gibson	MP350	7331

Committees on Computing

UTCS Board	Chairman	Prof. D.M. Nowlan	4984
Natural Language Processing Steering Committee	Chairman	Prof. I. Lancashire	828-5273
UTCS Users' Committee	Chairman	Prof. J.T. Stevenson	6930
	Secretary	Ms C. Pereira	8204

UTCS Terminal and Advising Sites

Names and Locations

- **Central Advising Office (CAO), 978-HELP**
- **Education Facility (Educ),** McLennan Labs, 60 St. George St., Room 221
- **Engineering Annex (EA, CDF),** 11 King's College Road, Rooms 103, 104, 107, 107B, 201, 203.
- **Erindale College (Erin), 828-5339,** Mississauga Road, Erindale Campus, Rooms 2005, 2039, 2045
- **Robarts,** Robarts Library, 130 St. George St., Room 1061A
- **Scarborough College (Scar), 284-3122,** Military Trail, Scarborough Campus, Rooms S624, S625, S627, S628, S628A
- **Sidney Smith (Sidney),** 100 St. George St., Rooms 1071, 1073, 2105
- **St.Michael's College,** 121 St. Joseph St., Room 107
- **Trinity College,** 6 Hoskins Ave., Room 024
- **Victoria University,** 73 Queens Park Cres., Room 005.

Sites	**Hours of Access**				**Restrictions***	**Advising**
	Mon-Thurs	Fri	Sat	Sun		
CAO	10:00-18:00	10:00-18:00	closed	closed	Research	978-HELP
CDF	24 hrs	24 hrs	24 hrs	24 hrs	Undergrads	No
EA	24 hrs	24 hrs	24 hrs	24 hrs	None	978-HELP for Research
Educ	24 hrs†	24 hrs†	24 hrs†	24 hrs†	Research**	978-HELP
(outer)	24 hrs†	24 hrs†	24 hrs†	24 hrs†	Research	978-HELP
Erin (2039)□	9:00-17:00	9:00-17:00	12:00-16:00	12:00-16:00	Research	Rm 2005
(2045)	24 hrs	24 hrs	24 hrs	24 hrs	Undergrads	Rm 2005
Robarts	8:30-24:00	8:30-24:00	9:00-17:00	13:00-22:00	None	978-HELP for Researh
Scar	9:00-24:00	9:00-24:00	10:00-17:00	closed	Research	Rm S626
					Undergrads	Rm S626-A
Sidney	7:00-24:00	7:00-24:00	7:00-24:00	7:00-24:00	None	978-HELP for Research
St.Michael's	24 hrs	24 hrs	24 hrs	24 hrs	None	Arranged by College
Trinity	8:00-22:00	8:00-22:00	8:00-22:00	8:00-22:00	None	Arranged by College
Victoria	8:30-23:00	8:30-23:00	closed	closed	None	Arranged by College

* Research includes graduates, faculty, staff. ** May be unavailable due to UTCS courses. □ key access available.
† Building open Mon. - Thurs. 7:00 - 22:00, Fri. 7:00 - 17:00. Building closed Sat. & Sun.

Advising Hours

CAO	Monday through Friday, 10:00 - 18:00
Scar	Monday through Friday, 09:00 - 17:00
Erin	Mon. 09:00-17:00, Tues.-Thurs. 09:00-20:00, Fri. 09:00-17:00.

Services Available
(Y=yes, N=no)

	Keypunch	**PACX**	**Printers**	**Network Terminal Server**	**DCS Micros**
CDF	N	N	Y	N	N
EA	Y	N	Y	Y	N
Educ	N	Y	N	N	N
Erin	N	Y	Y	Y	N
Robarts	N	Y	Y	N	Y
Scar	N	Y	Y	Y	N
Sidney	N	N	Y	Y	Y
St.Michael's	N	Y	Y	N	Y
Trinity	N	N	Y	N	Y
Victoria	N	Y	Y	N	Y

UTCS Services

The principle mandate of UTCS is to plan, implement, and operate computer facilities and "common-carrier" networks, and to plan and support divisional, departmental or project computer facilities as requested.

UTCS Centrally Owned and Managed

Systems

IBM MVS

- TSO, WYLBUR,APL, Batch
- 4381-R03 processor, 32 megabytes of memory
- MVS operating system

IBM VM/CMS

- provides General Purpose Timesharing; access to NetNorth, BITNET, and EARN networks
- 4381-P02 processor, 16 megabytes of memory
- CP operating system, VM/SP Release 3
  CMS timesharing system, VM/SP Release 3
  RSCS spooling system, Release3

GP UNIX

- provides General Purpose Timesharing using Berkeley UNIX 4.2BSD
- VAX-11/750, 5 megabytes of memory
- typesetting hardware (CAT/8)
- offers USENET "news" and electronic mail to most uucp sites

Services

Communications & Technical Support
Primary Phones: 978-3787, 978-4967

- Communications Group provides communications systems, terminals, modems, data channels: consulting and installation.
- Field Service Group installs and maintains communications and computer systems on a contract basis or on a cost-per-call basis.
- provides consulting on computer systems technology and installs computer systems
- provides access between the IBM systems and machines using UNIX, VMS and other operating systems. Ethernet and Pronet technologies are used over various transmission media including optical fibre. More basic communications techniques are also used for moderate speed links.
- provides access to NetNorth (BITNET), the North American Universities Network; and USENET, the UNIX networking fraternity
- will provide a communications solution to department needs on a contractual basis.

User Interface Group
Primary Phone: 978-HELP

- provides advising, consulting and documentation on:
  - command languages including CMS, TS0, WYLBUR, JCL and UNIX
  - high level languages including FORTRAN, APL and PL/I
  - packages and libraries including SAS, SPSS-X, BMDP, IMSL and NAg
  - editors and formatters including XEDIT, TSO, WYLBUR, ed, SCRIBE, nroff/troff
- installs and maintains application packages
- provides courses on the more popular services
- provides general micro support
  - selection consulting for hardware and software
  - Micro Lab for evaluation of hardware and software
  - advice on University discounts
  - media conversion and data transfer
  - operates UTCS Microcomputer Bulletin Board System

Facilities Managed by UTCS

Administrative Computing

- provides administrative IMS/VS,DB/DC,DB2, Batch and TS0
- 4381-R03 processor, 32 megabytes of memory
- MVS operating system

UNIX SAS (Statistical Analysis Services)

- provides UNIX Statistical Analysis Service (Dept. of Statistics only)
- PDP-11/70, 4 megabytes of memory
- UNIX Seventh Edition

Computer Disciplines Facility/VAX

VAX-11/780, 4 megabytes of memory
VAX-11/750, 4 megabytes of memory
VAX-11/750, 3 megabytes of memory

- provide Computer Science interactive access
- UNIX (Berkeley UNIX 4.2BSD)

Computer Disciplines Facility/PC

- 82 TI Professional Computers connected in a Local Area Network
- provides introductory Computer Science instruction
- MS-DOS with Turing environment

Scarborough College Systems

VAX-11/750, 5 megabytes of memory
VAX-11/750, 3 megabytes of memory
- provides instructional access using UNIX (Berkeley UNIX 4.2BSD)

Erindale College Systems

VAX -11/780, 4 megabytes of memory
- provides instructional access using VMS
- provides research access

VAX-11/750, 5 megabytes of memory
- provides instructional access using UNIX (Berkeley UNIX 4.2BSD)

Private Funding - Alumni Affairs

VAX-11/750, 6 megabytes of memory
- provides database services to the owner departments using VMS

EPAS Facility

- 4361-5 processor, 12 megabytes of memory
- provides general VM/CMS services to the owner departments

Cumulative Index for 1985

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